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REED SMITH, LLP

ATTN: PATENT RECORDS DEPARTMENT

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EXAMINER

MOYER, DALE S

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/595,904	Applicant(s) IGARASHI ET AL.	
	Examiner Dale Shawn Moyer	Art Unit 4117	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 May 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>5/19/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). A certified copy of foreign priority applications JP-2003-387323, JP-2003-387325, JP-2003-387327, JP-2004-135204, JP-2004-135211, and JP-2004-135215 have been received and have been placed of record in the file.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because multiple reference characters have been used to represent the same element. For example, reference characters 11 and 16 represent a vehicle speed sensor, reference characters 12 and 17 represent an engine speed sensor, and reference characters 13 and 18 represent an accelerator angle sensor. The Examiner notes that this is not a complete listing of elements having multiple reference characters and instructs Applicant to thoroughly review the drawings and specification and revise as necessary. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of

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any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. In addition to Replacement Sheets containing the corrected drawing figure(s), applicant is required to submit a marked-up copy of each Replacement Sheet including annotations indicating the changes made to the previous version. The marked-up copy must be clearly labeled as "Annotated Sheets" and must be presented in the amendment or remarks section that explains the change(s) to the drawings. See 37 CFR 1.121(d)(1). Failure to timely submit the proposed drawing and marked-up copy will result in the abandonment of the application.

Specification

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The

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disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract of the invention is objected to because its length exceeds the 150 word limit and because it includes the phrase "this disclosure relates to."

4. A substitute specification excluding the claims is required pursuant to 37 CFR 1.125(a) because the specification is incomplete. The specification must be filed on paper having the dimensions 8 1/2 by 11 inches. See MPEP 608.01 and 37 CFR 1.52(a)(1) and 37 CFR 1.84(f).

A substitute specification must not contain new matter. The substitute specification must be submitted with markings showing all the changes relative to the immediate prior version of the specification of record. The text of any added subject matter must be shown by underlining the added text. The text of any deleted matter must be shown by strike-through except that double brackets placed before and after the deleted characters may be used to show deletion of five or fewer consecutive characters. The text of any deleted subject matter must be shown by being placed within double brackets if strike-through cannot be easily perceived. An accompanying clean version (without markings) and a statement that the substitute specification contains no new matter must also be supplied. Numbering the paragraphs of the specification of record is not considered a change that must be shown.

Claim Objections

1. The ordering of claim 19 is objected to. A series of singular dependent claims is permissible in which a dependent claim refers to a preceding claim which, in turn, refers to another preceding claim.

A claim which depends from a dependent claim should not be separated by any claim which does not also depend from said dependent claim. It should be kept in mind that a dependent claim may refer to any preceding independent claim. In general, applicant's sequence will not be changed. See MPEP § 608.01(n).

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 21 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Regarding claim 21:

The specification does not enable the information processing means to calculate a cumulative traveling distance based on "the fuel flow rate and/or the accelerator angle and from detected information on the use of the auxiliary brake." That is, there is no description explaining how a traveling distance can be calculated by measuring the fuel

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flow rate and the usage of the auxiliary brake or by measuring the accelerator angle and the usage of the auxiliary brake.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 1, 3, 5, 9-12, 14, 19-21, and 23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1:

The words "an information detection means for detecting information" are understood to invoke 35 U.S.C. 112, sixth paragraph. However, it is unclear which means from the specification is being invoked. That is, an information detection means could refer to more than one structure in the specification. Further, no one structure from the specification can perform the functions claimed by dependent claims 4-11. Thus the limitation "information detection means for detecting information" renders the claim indefinite.

Regarding claim 3:

The words "and/or" in the phrase "the setter is adapted such that the required warning conditions and/or the previously set time can be modified," render the claim indefinite. That is, the words "and/or" render the claim indefinite since it is unclear whether "the required warning conditions and the previously set time" or "the required

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warning conditions or the previously set time” can be modified. For the purpose of examination the words “and/or” are interpreted herein as “or.”

Regarding claim 5:

The words “and/or” in the phrase “the accelerator angle and/or an accelerator angle change,” render the claim indefinite. That is, the words “and/or” render the claim indefinite since it is unclear whether “the accelerator angle and an accelerator angle change” or “the accelerator angle or an accelerator angle change” is included in the process information. For the purpose of examination the words “and/or” are interpreted herein as “or.”

Regarding claim 9:

Claim 9 recites a limitation including the phrase “the information-processing means detects a fuel flow rate.” However, the Examiner notes that a processor is not a sensor. Thus, this limitation renders the claim indefinite since the information-processing means is not capable of detecting a fuel flow rate.

Regarding claim 11:

Claim 11 recites a limitation including the phrase “the information-processing means detects and accelerator angle.” However, the Examiner notes that a processor is not a sensor. Thus, this limitation renders the claim indefinite since the information-processing means is not capable of detecting an accelerator angle.

Regarding claim 12:

Claim 12 is indefinite since it is unclear if the information processing means enables the warnings to be generated as in the first limitation, or if the selection is

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enabled using the setter. For the purposes of examination, claim 12 is best understood to mean that the setter enables or disables the selection of the warning.

Regarding claim 14:

The words “and/or” in the phrase “the printer has an ability to output information that relates to the occurrence of the warning and/or overtime event stored within the information storage means,” render the claim indefinite. That is, the words “and/or” render the claim indefinite since it is unclear whether the printer has the ability to output “the occurrence of the warning and overtime event stored within the information storage means” or “the occurrence of the warning or overtime event stored within the information storage means.” For the purpose of examination the words “and/or” are interpreted herein as “or.”

Regarding claim 19:

The words “and/or” in the phrase “the setter enabling the required warning conditions and/or the previously set time to have respective settings modified,” render the claim indefinite. That is, the words “and/or” render the claim indefinite since it is unclear whether the setter enables “the required warning conditions and the previously set time” or “the required warning conditions or the previously set time” to have respective settings modified. For the purpose of examination the words “and/or” are interpreted herein as “or.”

The phrase “the previously set time to have respective setting modified” is unclear and therefore renders the claim indefinite. For the purpose of examination, the

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abovementioned phrase is best understood to mean that the setter is capable of modifying system parameters.

Regarding claim 20:

The words “and/or” in the phrase “a vehicle-mounted analyzer and/or vehicle owner/user company’s data analyzer” render the claim indefinite. That is, the words “and/or” render the claim indefinite since it is unclear whether the fuel-saving management system includes “a vehicle-mounted analyzer and a vehicle owner/user company’s data analyzer” or if the fuel-saving management system includes “a vehicle-mounted analyzer or a vehicle owner/user company’s data analyzer.” For the purpose of examination, the words “and/or” are interpreted herein as “or.”

The phrase “the vehicle-mounted analyzer includes information detection means for detecting a fuel flow rate and/or accelerator angle of the vehicle and information on use of the auxiliary brake,” render the claim indefinite for three reasons. First, the words “and/or” render the claim indefinite since it is unclear whether the vehicle-mounted analyzer includes information detection means for detecting “the vehicle-mounted analyzer includes information a fuel flow rate and accelerator angle” or “the vehicle-mounted analyzer includes information a fuel flow rate or the accelerator angle” of the vehicle and information on use of the auxiliary brake. For the purpose of examination the words “and/or” are interpreted herein as “or.” Second, the words “means for” seem to be an attempt to invoke 35 U.S.C. 112, sixth paragraph. However, the claim is indefinite since a means for detecting a fuel flow rate would not be capable of detecting an accelerator angle. Third, the claim is indefinite since there is no indication as to how

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the vehicle mounted analyzer includes information on the use of the auxiliary brake.

That is, the claim refers to no apparatus for sensing information indicative of the auxiliary brake.

The words "and/or" in the phrase "information-processing means for calculating, from the fuel flow rate and/or the accelerator angle and from detected information on the use of the auxiliary brake," render the claim indefinite. That is, the words "and/or" render the claim indefinite since it is unclear whether information-processing means for calculating, from "the fuel flow rate and the accelerator angle" or "the fuel flow rate or the accelerator angle" and from detected information on the use of the auxiliary brake. For the purpose of examination the words "and/or" are interpreted herein as "or."

Regarding claim 21:

The words "and/or" in the phrase "the zero accelerator angle state is established when a fuel flow rate becomes less than a previously set value and/or when the accelerator angle becomes approximately zero," render the claim indefinite. That is, the words "and/or" render the claim indefinite since it is unclear whether the zero accelerator angle state is established "when a fuel flow rate becomes less than a previously set value and when the accelerator angle becomes approximately zero" or "when a fuel flow rate becomes less than a previously set value or when the accelerator angle becomes approximately zero." For the purpose of examination the words "and/or" are interpreted herein as "or."

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The phrase “a fuel flow rate” in renders the claim indefinite since it is unclear whether the Applicant is referring to the fuel flow rate of claim 20 or if the Applicant is introducing a second fuel flow rate.

Regarding claim 23:

The phrase “a cumulative traveling distance” renders the claim indefinite since it is unclear whether Applicant is referring to the cumulative traveling distance of claim 20 or if Applicant is introducing a second cumulative traveling distance.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-5, 7-17, 19-20, and 23-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Hagenbuch (United States Patent Number 5,754,965).

Regarding claim 1:

Hagenbuch discloses a fuel-saving management system for a motor vehicle, the system comprising:

an information detection means (Figs. 1B and 1C; elements 67, 67A, 67C, 67E, and 67I; column 6, lines 30-50) for detecting information on a running state (column 12, lines 7-12) of the vehicle (element 11);

an information-processing means (Fig. 2A; element 41; column 7, lines 15-33) for processing the information detected by the information detection means (column 7, lines 34-43), the information-processing means also generating a warning when the processed information satisfies required warning conditions (column 6, lines 1-15); and

an information storage means for storing the processed information (Fig. 2B; elements 83, 85, 87, and 89; column 8, line 2; column 9, line 66 through column 10, line 15);

wherein, when a time during which the processed information is maintained to satisfy the required warning conditions (column 12, lines 7-12) or an elapsed time of the processed information exceeds a previously set time the information-processing means stores the occurrence of the overtime event into the information storage means (column 11, lines 43-67).

Regarding claim 2:

Hagenbuch discloses a fuel-saving management system for a motor vehicle, the system comprising:

an information detection means (Figs. 1B and 1C; elements 67, 67A, 67C, 67E, and 67I; column 6, lines 30-50) for detecting information on a running state of the vehicle (column 12, lines 7-12); and

an information-processing means (Fig. 2A; element 41; column 7, lines 15-33) for processing the information detected by the information detection means (column 7, lines 34-43), the information-processing means also

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generating a warning when the processed information satisfies required warning conditions (column 6, lines 1-15);

wherein the system further includes a setter (Fig. 8; elements 59, 61; column 14, lines 10-23) adapted such that the required warning conditions can be modified (item 28; Fig. 8; column 19, lines 30-33).

Regarding claim 3:

Hagenbuch discloses a fuel-saving management system for a motor vehicle, the system comprising:

an information detection means (Figs. 1B and 1C; elements 67, 67A, 67C, 67E, and 67I; column 6, lines 30-50) for detecting information on a running state of the vehicle (column 12, lines 7-12);

an information-processing means (Fig. 2A; element 41; column 7, lines 15-33) for processing the information detected by the information detection means (column 7, lines 34-43), the information-processing means also generating a warning when the processed information satisfies required warning conditions (column 6, lines 1-15); and

an information storage means for storing the processed information (Fig. 2B; elements 83, 85, 87, and 89; column 8, line 2; column 9, line 66 through column 10, line 15);

a setter connected to the vehicle (Fig. 8; elements 59, 61; column 14, lines 10-23);

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when either a time during which the processed information is maintained to satisfy the required warning conditions (column 11, lines 43-67), or an elapsed time of the processed information exceeds a previously set time, the information-processing means stores the occurrence of the overtime event into the information storage means; and (column 12, lines 7-45) the setter is adapted such that the required warning conditions (column 19, 30-33) [or] the previously set time can be modified (column 12, lines 11-12).

Regarding claim 4:

Hagenbuch discloses the fuel-saving management system of claim 1, wherein the information on the running state of the vehicle includes an accelerator angle (Fig. 1C; element 67B).

Regarding claim 5:

Hagenbuch discloses the fuel-saving management system of claim 4, wherein the processed information includes the accelerator angle (Fig. 1C; element 67B) [or] an accelerator angle change which is a variation in the accelerator angle per unit time.

Regarding claim 7:

Hagenbuch discloses the fuel-saving management system of claim 1, wherein the processed information includes processed general-road information and processed highway/expressway information (column 9, line 66 through column 10, line 15).

Regarding claim 8:

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Hagenbuch discloses the fuel-saving management system of claim 7, wherein the processed general-road information includes either a vehicle speed (element 67E), an engine speed (element 67A), an accelerator angle (element 67B), or an elapsed idling time, or a combination of any two thereof (column 9, line 66 through column 10, line 15).

Regarding claim 9:

Hagenbuch discloses the fuel-saving management system of claim 8, wherein the information-processing means detects a fuel flow rate (elements 67C and 73E, column 6, lines 30-57) as information on the running state of the vehicle (element 11; column 12, lines 7-12), and generates the warning on the engine speed (element 67A) when the fuel flow rate exceeds a previously set value (column 10, lines 16-26).

Regarding claim 10:

Hagenbuch discloses the fuel saving management system of claim 7, wherein the processed highway/expressway information includes either a vehicle speed (element 67E; column 12, lines 7-12), an accelerator angle change, a vehicle speed change, a top-gear non-operation elapsed time, or an auxiliary brake usage ratio, or a combination of any two thereof.

Regarding claim 11:

Hagenbuch discloses the fuel saving management system of claim 10, wherein the information-processing means detects an accelerator angle (element 67B; column 6, lines 30-50) as information on the running state of the vehicle

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(column 12, lines 7-12), and generates the warning on the vehicle speed when the accelerator angle exceeds a previously set value (column 10, lines 16-26).

Regarding claim 12:

Hagenbuch discloses the fuel-saving management system of claim 2, wherein: the setter enables selection of whether the warning is to be generated (item 28; Fig. 8; column 19, lines 30-33).

Regarding claim 13:

Hagenbuch discloses a fuel-saving management system for a motor vehicle, the system comprising:

an information detection means (Figs. 1B and 1C; elements 67, 67A, 67C, 67E, and 67I; column 6, lines 30-50) for detecting information on a running state of the vehicle (column 12, lines 7-12);

information-processing means (Fig. 2A; element 41; column 7, lines 15-33) for processing the information column 7, lines 34-43); and

information storage means for storing processed information as the information that the information-processing means has processed (Fig. 2B; elements 83, 85, 87, and 89; column 8, line 2; column 9, line 66 through column 10, line 15);

wherein the system further has, on the vehicle, a printer (element 77) with an ability to output information that relates to the processed information stored within the information storage means (Fig. 10B; element 181; column 19, lines 15-16).

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Regarding claim 14:

Hagenbuch discloses the fuel-saving management system of claim 13, wherein:

when the processed information satisfies required warning condition, the information-processing means generates a warning (column 6, lines 1-15), and when either a time during which the processed information is maintained to satisfy the required warning conditions (column 12, lines 7-12) [or] an elapsed time of the processed information exceeds a previously set time (column 11, lines 43-67), the information-processing means stores the occurrence of the overtime event into the information storage means (column 11, lines 43-67); and

the printer has ability to output information that relates to the occurrence of the warning [or] overtime event stored within the information storage means (column 14, lines 19-20).

Regarding claim 15:

Hagenbuch discloses the fuel-saving management system of claim 14, wherein the information-processing means calculates an occurrence count of the overtime event (column 19, lines 18-21; column 19, lines 39-46), calculates an overlimit event occurrence rate (column 19, lines 47-52; "FREQ.") from the occurrence count of the overtime event, and when the overlimit event occurrence rate exceeds a previously set value (column 14, line 60 through column 15, line 22), causes a warning mark to be displayed on the information output from the printer in connection with the processed information (column 19, lines 53-56).

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Regarding claim 16:

Hagenbuch discloses the fuel-saving management system of claim 15, wherein the overlimit event occurrence rate relates to a traveling distance (column 8, lines 53-57) of the vehicle.

Regarding claim 17:

Hagenbuch discloses the fuel-saving management system of claim 13, wherein: the information-processing means calculates a fuel consumption rate of the vehicle (Fig. 1C; element 67C; column 6, lines 30-50); and the printer has an ability to output the fuel consumption rate (column 14, lines 19-20).

Regarding claim 19:

Hagenbuch discloses the fuel-saving management system of claim 14, further comprising: a setter (Fig. 8; elements 59, 61; column 14, lines 10-23) mounted on the vehicle, the setter enabling the required warning conditions (column 19, lines 30-33) [or] the previously set time to have respective settings modified (column 12, lines 11-12); wherein the printer has an ability to output the required warning conditions and previously set time whose settings were modified using the setter (column 14, lines 19-20).

Regarding claim 20:

Hagenbuch discloses a fuel-saving management system, comprising:
a vehicle-mounted analyzer [or] vehicle owner/user company's data analyzer (column 6, line 13) for conducting analyses on fuel efficiency (column 5, lines 25-50) of a vehicle having an auxiliary brake (column 10, lines 60-66);

wherein: the vehicle-mounted analyzer includes information detection means for detecting a fuel flow rate (element 67C) [or] an accelerator angle (element 67B) of the vehicle and information on use of the auxiliary brake (element 67I; column 6, lines 30-50); and

the vehicle-mounted analyzer [or] the vehicle owner/user company's data analyzer includes:

information-processing means for calculating (Fig. 2A; element 41; column 7, lines 15-33), from the fuel flow rate [or] the accelerator angle and from detected information on the use of the auxiliary brake, a cumulative traveling distance through which the vehicle traveled in a zero accelerator angle state with the auxiliary brake not being used (column 11, lines 1-12); and

information storage means for storing the cumulative traveling distance that the information detection means has calculated (Fig. 2B; elements 83, 85, 87, and 89; column 8, line 2; column 9, line 66 through column 10, line 15).

Regarding claim 23:

Hagenbuch discloses the fuel-saving management system of claim 20, further comprising: information detection means for detecting a vehicle speed of the vehicle (element 67E; column 6, lines 30-50; column 10, lines 30-40); wherein the information-processing means calculates a cumulative traveling distance from the vehicle speed detected by the information detection means,

and from an elapsed time of traveling in the zero accelerator angle state with the auxiliary brake not being used (column 11, lines 1-12).

Regarding claim 24:

Hagenbuch discloses the fuel-saving management system of claim 20, further comprising a printer (Fig. 2A; element 77) in the vehicle-mounted analyzer, wherein the printer has an ability to output information on the cumulative traveling distance stored within the information storage means (column 14, lines 19-20).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 18 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hagenbuch (United States Patent Number 5,754,965).

Regarding claim 18:

Hagenbuch discloses the fuel-saving management system of claim 13, further comprising: a travel starting switch operated during start of a travel of the vehicle (step 121; column 15, lines 57-58); and a printing switch operated for output from the printer (column 18, lines 48-49); wherein: when the travel starting switch is operated, the information-processing means erases information relating

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to the processed information stored within the information storage means (column 11, lines 30-42), and restarts storage of the information relating to the processed information, into the information storage means (column 8, lines 19-24).

Hagenbuch does not disclose that when the printing switch is operated, the information-processing means erases the information relating to the processed information stored within the information storage means.

However, the Examiner notes that Applicant has not disclosed that erasing information after the printing switch is operated solves a stated problem. Further, the Applicant has not disclosed that erasing information after the printing switch is operated serves a particular purpose.

Since the limitation of erasing information after the printing switch is operated does not solve a stated problem and does not serve a particular purpose, a person of ordinary skill in the art, at the time of invention would have expected that the printer taught by Applicant to perform the same function of printing information equally well as the printer taught by Hagenbuch.

Therefore, it would have been prima facie obvious to modify Hagenbuch to obtain the invention as specified by claim 18 because such a modification would have been considered a mere design consideration which fails to patentably distinguish over the prior art of Hagenbuch. See MPEP 2144.04(IV).

Regarding claim 21:

Hagenbuch teaches the fuel-saving management system of claim 20.

Hagenbuch does not specifically teach that a zero accelerator angle state is established when a fuel flow rate becomes less than a previously set value [or] when the accelerator angle becomes approximately zero.

However, it would have been obvious a person of ordinary skill in the art at the time of invention that the acceleration angle would become approximately zero anytime the driver removes a foot from the accelerator. Therefore, the person of ordinary skill in the art would appreciate that the fuel saving management system taught by Hagenbuch establishes the zero accelerator angle state during normal operation.

10. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hagenbuch (United States Patent Number 5,754,965) as applied to claim 5 above, and further in view of Rachel (United States Patent Number 3,889,647).

Regarding claim 6:

Hagenbuch teaches the fuel-saving management system of claim 5.

Hagenbuch does not teach that the vehicle includes a speed limiter configured to adjust a vehicle speed automatically to a level not greater than a required speed. Further, Hagenbuch does not teach that the information-processing means generates a warning on the accelerator angle when the speed limiter is inactive.

Rachel teaches an apparatus for use with an engine having an electronic fuel injection system. Rachel also teaches an apparatus which governs engine speed to a predetermined set point (abstract).

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It would have been obvious to a person of ordinary skill in the art at the time of invention to combine the fuel-saving management system taught by Hagenbuch with the engine speed governing apparatus taught by Rachel. For example, the person of ordinary skill in the art would have been motivated to combine the teachings of Hagenbuch with the teachings of Rachel to limit the maximum speed of a vehicle having the fuel-saving management system in order to improve driver safety.

11. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hagenbuch (United States Patent Number 5,754,965) as applied to claim 21 above, and further in view of Hara et al. (United States Patent Number 4,506,752).

Regarding claim 22:

Hagenbuch teaches the fuel-saving management system of claim 21.

Hagenbuch does not teach that the vehicle includes an auto-cruise system having an ability to adjust a vehicle speed of the vehicle to a required vehicle speed automatically. Further, Hagenbuch does not teach that the information-processing means judges that during operation of the auto-cruise system, the vehicle is in the zero accelerator angle state when the fuel flow rate is less than the previously set value.

However, the Examiner notes that the fuel flow rate will be less than the previously set value anytime the operator removes a foot from the accelerator pedal.

It would have been obvious a person of ordinary skill in the art at the time of invention that the fuel flow rate would become approximately zero anytime the driver removes a foot from the accelerator. Therefore, the person of ordinary skill in the art would appreciate that the fuel saving management system taught by Hagenbuch establishes the zero accelerator angle state during normal operation.

Hara et al. teach a cruise control system for automatically maintaining a predetermined vehicle speed (abstract). Further Hara et al. teach that the cruise control system includes a microprocessor for controlling various running conditions of the vehicle (column 2, lines 3-25).

It would have been obvious to a person of ordinary skill in the art at the time of invention to combine the fuel-saving management system taught by Hagenbuch with the cruise control system taught by Hara et al. For example, the person of ordinary skill in the art would have been motivated to combine the teachings of Hagenbuch with the teachings of Hara et al. since Hara et al. teaches that the cruise control system improves fuel consumption (abstract).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dale Shawn Moyer whose telephone number is (571)270-7821. The examiner can normally be reached on Monday through Thursday from 10AM to 4PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Naeem U. Haq can be reached on (571)272-6758. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Dale Shawn Moyer/
Examiner, Art Unit 4117

/Naeem Haq/
Supervisory Patent Examiner, Art
Unit 4117

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